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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,565	11/20/2003	Phillip Kaufman	IOR-001	3550
29933	7590	03/10/2006	EXAMINER	
PALMER & DODGE, LLP KATHLEEN M. WILLIAMS 111 HUNTINGTON AVENUE BOSTON, MA 02199			BAUER, SCOTT ALLEN	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

JK

Office Action Summary	Application No.	Applicant(s)	
	10/719,565	KAUFMAN, PHILLIP	
	Examiner	Art Unit	
	Scott Bauer	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/28/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-19 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a credible asserted utility or a well-established utility.

3. MPEP 2107.02 III. B defines procedure for evaluating the credibility of an asserted utility. The section states: *"one situation where an assertion of utility would not be considered credible is where a person of ordinary skill would consider the assertion to not be credible in view of contemporary knowledge and where nothing offered by the applicant would counter what contemporary knowledge might otherwise suggest."*

The asserted utility of using ion emissions to modify weather conditions including inducing or limiting precipitation, increasing or decreasing relative humidity to control forest fires or disperse fog, aiding in the control of violent storms, increasing or reducing temperature and changing wind speed and direction, has been rejected because one of ordinary skill in the art would consider the assertion to not be credible in view of contemporary knowledge.

The evidence relied on as support for factual finding relied upon in reaching this conclusion is:

Moore, S.K. (2004). Electric Rainmaking Technology Gets Mexico's Blessing.
IEEE Spectrum, Volume 41, Issue 4, 26-27.

Port, Otis. "Rainmaking Has Its True Believers -- -- And Skeptics." BusinessWeek
Oct. 24, 2005.
<http://www.businessweek.com/magazine/content/05_43/b3956105.htm>.

Weather Modification Advisory Committee. (2004). *Summary of Minutes August 12, 2004*. Austin, Texas.

Bray, Hiawatha, "Drought Busters"
The Boston Globe, March 17, 2003, C1-C2

4. It should be noted that the MPEP states that evidence should be submitted regardless of the publication date. The above references are not to be taken as prior art, but instead as evidence for support for factual finding in establishing the credibility of utility.

5. With regard to the article, "Electric Rainmaking Technology Gets Mexico's Blessing", the article demonstrates the doubts raised about the credibility of the invention's utility. In paragraph 3, George Bomar, a meteorologist in charge of weather modification projects for the state of Texas, states that "[ionization] is highly

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unconventional and in my realm of experience, I have seen no concrete evidence published in a refereed journal, nor have I seen sufficient credible eyewitness verification that the technology works as touted."

In paragraph 9, the article further states, *"Despite the claimed successes, ionization has its critics. Atmospheric scientist contacted for this article noted that even the four years of testing was too brief a period to prove that the effects seen were not due to some sort of extraordinary variability in the local weather".*

Ross Hoffman, a vice president at Atmospheric and Environmental Research Inc. in Lexington Mass., who helped complete a scientific review of cloud seeding released by the U.S. National Research Council, Washington, D.C., in November 2003, states in paragraph 10 that *"Weather modification technology has always has a hard time standing up to rigorous scientific scrutiny".*

Finally, in paragraph 11, the article states, *"Ionization also suffers doubts about its basic plausibility. Brian Tinsley, a physicist at the University of Texas, Dallas, and an expert on the effects of ions and current in the atmosphere, points out that the ionosphere is about 250,000 volts positive compared with the ground. But the effect of the resulting current, and changes to it from cosmic rays and other phenomena, on droplet formation and precipitation is "relatively small" and restricted to certain types of clouds in specific locations, he says. Considering the size of the natural voltage and the modesty of its impact on rainfall, effective weather modification using ionization, he believes, would require enormous power input and hundreds of square kilometers of antenna arrays."*

6. The article in BusinessWeek points out that the utility of the invention is in question, pointing out in paragraph 5 that *"Perhaps the most controversial technology comes from Russia and Mexico."* Further, the article quotes Roelof T. Brintjes, a weather modification expert at the National Center for Atmospheric Research in Boulder Co. Brintjes quotes, *"Personally I think it's a hoax,"* and that, *"It has no scientific basis."*

7. In the summary of minutes from the Weather Advisory Committee, Committee member Everett Deschner raised questions about the credibility of the utility of the present invention. The summary states *"Mr. Deschner also stated that he did not think Ionogenics had yet given a credible hypothesis to show why the system should work. Mr. Deschner requested calculations on the amount of electrical flux to be generated or something of that nature which he felt was necessary before considering the application. Committee member Dr. Richard Orville stated that he felt Dr. Bisiacchi should provide evidence of interaction with the professional community which he felt was very necessary in the process of weather modification."*

8. Finally the prior art submitted by the Applicant raises questions of the credibility of the utility of the invention. In The Boson Globe, Gianfranco Bisiacchi, Ionogenics' director of operations, admits that the utility is extremely difficult to prove. In paragraph 15, the article states, *"Bisiacchi admits that it's extremely difficult to prove that the*

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ionizers are the reason for the increase. The tests cover such a short period of time that some natural phenomenon could also explain the difference.” The article also quotes Brian Tinsley who states, “he doubts that the ionogenics scientists can fine-tune atmospheric ionization to produce rain by request. ‘I wouldn’t think these people would be very likely to have a scientifically valid approach,’ he says.”

9. The above-mentioned evidence demonstrates many persons of ordinary skill in the art, who consider the assertion to not be credible in view of contemporary knowledge. In the Examiner’s opinion, the above articles attempted to maintain a neutral position of the story. However, none of the above mentioned evidence, or any other evidence currently offered by the applicant would counter what contemporary knowledge might otherwise suggest. In light of the presented evidence the asserted utility of the present invention is not found to be credible.

10. MPEP paragraph 2107.02 V. states, *“In appropriate situations the Office may require an applicant to substantiate an asserted utility for a claimed invention.”* The MPEP further states that *“In In re Citron, the court held that when an ‘alleged utility appears to be not credible in light of the knowledge of the art, or factually misleading, applicant must establish the asserted utility by acceptable proof.’ 325 F.2d at 253, 139 USPQ at 520. The courts thus established a higher burden on the applicant where the statement of use is not credible or misleading. In such a case, the examiner should challenge the use and require sufficient evidence of operativeness.*

Applicant is encouraged to submit evidence of operativeness if Applicant believes the submission would help further the prosecution of the application. MPEP paragraph 2107.02 V. further states that Office personnel should indicate, where appropriate *"what type of evidentiary showing can be provided by the applicant to remedy the problem."* The examiner believes it fair to request the same evidence asked for by the Weather Modification Advisory Committee of August 12, 2004 as cited above, that is, calculations on the amount of electrical flux to be generated as well as evidence of interaction with the professional community. Analysis of any collected data would be helpful in the prosecution as well.

Claim Rejections - 35 USC § 112

11. Claims 1-19 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a credibly asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Specification

12. In light of the 101 and 112 rejection above, the specification is presently objected to as not being enabling. The specification does not teach how the emission of ions into the atmosphere can be made to modify weather conditions such as inducing or inhibiting precipitation.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. In the event that the 101 and 112 rejections are overcome, Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Carpenter, Jr. (US 4,180,698).

15. With regard to Claim 1, Carpenter, Jr., in Figure 12, discloses an antenna for modifying weather conditions, the antenna comprising: a plurality of peripheral nodes (81); a central node (42) located within the plurality of peripheral nodes; a plurality of peripheral spokes (80) for connecting each of the peripheral nodes to adjacent peripheral nodes; and a plurality of radial spokes (82) for connecting the peripheral nodes to the central node. In this rejection, the antenna is a system for atmospheric conditioning, wherein an ion screen is used to reduce fields created by charged clouds and eliminating the hail producing capability of clouds (column 2 lines 9-45).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAB
02/17/2006



PHUONG T. VU
PRIMARY EXAMINER